

REMARKS

The claims are claims 1, 3, 9, 10, 12 and 18 to 20.

Claims 1, 10, 19 and 20 are amended in response to the rejection under 35 U.S.C. 112.

Claims 1, 3, 9, 10, 12, and 18 to 20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The FINAL REJECTION states that limitation "a critical path" is unclear and the limitation "a critical path being...multiply-accumulate core" is unclear.

Claims 1, 10, 19 and 20 as amended are proper under 35 U.S.C. 112. The "a critical path" limitation in each of claims 1, 10, 19 and 20 has been changed to "said at least one critical path." This makes clear that this phrase refers to the previously recited "at least one critical path." The Applicants submit that this recitation is now proper under 35 U.S.C. 112.

Claims 1, 10, 19 and 20 as amended now properly limit the recited critical path. Claims 1, 10, 19 and 20 recite "said at least one critical path being an electrical path" having an amount of time for an electrical signal to travel from an input to an output is greater than or equal to a predetermined amount of time and less than a longest amount of time that it takes any other electrical signal to travel from an input to an output. Claims 1, 10, 19 and 20 also recite the predetermined amount of time is less than the longest amount of time. Thus the amount of time to travel a critical path is greater than or equal to the predetermined amount of time and less than the longest amount of time and the predetermined amount of time is less than this longest amount of time. The Applicants respectfully submit that this is proper and definite as required by 35 U.S.C. 112.

Claims 1, 9, 10, 12, and 18 to 20 were rejected under 35 U.S.C. 102(e) as anticipated by Hansen et al U.S. Published Patent Application No. 2003/0110197 A1.

Claims 1, 10, 19 and 20 recite subject matter not anticipated by Hansen et al. Claims 1, 10, 19 and 20 each recite critical paths and that first cells include critical paths and second cells do not. Claims 1 and 19 each recite that "said at least one critical path being an electrical path for which an amount of time that it takes for an electrical signal to travel from an input of said multiply-accumulate core to an output of said multiply-accumulate core is greater than or equal to a predetermined amount of time and less than a longest amount of time that it takes any other electrical signal to travel from said input of said multiply-accumulate core to said output of said multiply-accumulate core, wherein said predetermined amount of time is less than said longest amount of time." Claims 10 and 20 include similar recitations relative to a parallel multiplier core. Hansen et al includes no teaching regarding such critical paths. Accordingly, claims 1, 10, 19 and 20 are allowable over Hansen et al.

Claims 1, 10, 19 and 20 recite further subject matter not anticipated by Hansen et al. Claims 1 and 10 recite first and second cells that are "structurally the same." Claims 1 and 10 recite that "a width of at least one of said first plurality of transistors" forming the first cells "is greater than a width of a corresponding one of said second plurality of transistors" forming the second cells. Claims 19 and 20 recite that the first Wallace tree cells are structurally the same as the second Wallace tree cells and that the first Booth decoder cells are structurally the same as the second Booth decoder cells. Claims 19 and 20 each recite that the first plurality of transistors of the first cells are a first width and that the corresponding second plurality of transistors of the second cells are a second smaller width. Thus

claims 1, 10, 19 and 20 each recite cells that are structurally the same with differing transistor widths dependent upon whether the cell is within a critical path. Hansen et al neither teaches the width of a transistor difference nor teaches cells differing in any way dependent upon whether they are in a critical path. Therefore Hansen cannot anticipate this limitation of claims 1 and 10.

Claims 9 and 18 recite subject matter not anticipated by Hansen et al. Claims 9 and 18 recite "said at least one second cell is a most significant bit or a least significant bit and said at least one first cell is not a most significant bit or a least significant bit." Respective base claims 1 and 10 recite that first cells include a critical path and second cells do not. Hansen et al includes no teaching regarding critical paths and no teaching that most significant bits or least significant bits are do not a critical path. While Hansen inherently includes most significant bit cells and least significant bit cells, Hanson fails to teach such cells are constructed differently as required by respective base claims 1 and 10. Accordingly, claims 9 and 18 are allowable over Hansen et al.

In summary, this application recites constructing first and second cells differently dependent upon whether they are on a critical path or not on a critical path. Hansen fails to teach the recited critical path. Hansen also fails to teach the recited differently constructed cells. In particular, Hansen fails to teach the differing transistor widths.

The Applicants respectfully request entry and consideration of this amendment. Entry of this amendment is proper at this time because the amendment serves only to clarify subject matter previously recited. Thus no new search or reconsideration is required.


The Applicants respectfully submit that all the present claims are allowable for the reasons set forth above. Therefore early

entry of this amendment, reconsideration and advance to issue are respectfully requested.

If the Examiner has any questions or other correspondence regarding this application, Applicants request that the Examiner contact Applicants' attorney at the below listed telephone number and address to facilitate prosecution.

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Respectfully submitted,


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